

**REMARKS**

Claims 1-12 are pending in the present application, and are rejected. Claims 2, 3, 5, 6, 8, 9, 11 and 12 are herein canceled. Claim 1 is herein amended. No new matter has been presented.

**Claim Rejections - 35 U.S.C. §103(a)**

The rejection of claims 1-12 under 35 U.S.C. 103(a) as being unpatentable over Masahide et al. (JP2001-048720) in view of Kim et al. (1995) and Kato et al. (JP 04304887A) is maintained for the reasons stated in the previous Office Action.

Applicants characterize the cited references as follows.

(1) JP Patent Application No. 2001-048720 to Masahide et al. ("Ref 1").

"This humectant and bacteriostatic agent comprises 1,2-octanediol wherein the agent is detergent or non-detergent." (Abstract).

"This humectant and bacteriostatic agent irritates skin less than p-hydroxybenzoic ester so that it can be a mild additive agent for the bear skin compared to p-hydroxybenzoic ester." (Page 2, line 41).

(2) J. Agric. Food Chem. 1995, 43, 2839-2845 to Kim et al. ("Ref 2")

"Antibacterial activity of 11 essential oil constituents against Escherichia coli, E.coli 0157:H7, Salmonella typhimurium, Listeria monocytogenes, and Vibrio vulnificus was tested..." (Abstract).

"[T]hese compounds could serve as potential antibacterial agents to inhibit pathogen growth in food". (Abstract).

“Test compounds. Carvacrol, citral, citronellal, limonene, and perillaldehyde were purchased from..., and eugenol, geraniol,  $\beta$ -ionone, linalool, nerolidol, and  $\alpha$ -terpineol were obtained from...”. (First paragraph of "Materials and methods" of page 2839).

(3) JP Patent No. JP04304887A to Kato et al. (“Ref 3”)

“The complex, which is made by binding a lysozyme and a guar gum enzymic hydrolyzate according to aminocarbonyl reaction, having excellent emulsifiability and antimicrobial properties is useful as a polymeric emulsifying agent and an antimicrobial agent for foods, medicines, cosmetics, etc.” (Abstract).

“The complex of the present invention is soluble in water and has high emulsifiability, and less inhibition of bacteriolytic activity which lysozyme originally has. In addition, the complex has antimicrobial properties against Gram-negative bacteria, which can not be obtained from lysozyme by itself”. (Page 4, line 6).

The Examiner asserts in the Office Action that:

Ref 1 discloses bacteriostatic compound that comprises 1,2-octanediol. The Ref 2 discloses that citral, geraniol, and perillaldehyde have antibacterial activity. One would have been motivated to combine citral, geraniol, and perillaldehyde to bacteriostatic agent disclosed in Ref 1 in order to achieve an expected additive benefit of formulating cosmetic agent having antibacterial activity.

Ref 2 discloses that citral, geraniol or perillaldehyde have antibacterial activity, and for years food borne illness resulting from consumption food contaminated

with pathogenic bacteria and or their toxins has been vital concern to public health. With regard to food preparation set forth in claims 10-12, one would have been motivated to formulate the obvious combination in food preparation.

Ref 3 discloses the bactericides are useful in food, pharmaceuticals and cosmetics. With regard to medicine and toiletries preparation set forth in claims 4-9, one would have been motivated to prepare the bacteriostatic agent of Ref 1 as modified by Ref 2 in a preparation including food, pharmaceuticals and cosmetics.

In the previous response, Applicants submitted a declaration demonstrating unexpectedly superior results associated with combining 1,2-octanediol with particular perfumes according to the present invention.

The Examiner asserts that Applicants' arguments filed on July 12, 2007 have been considered but are not persuasive. The Examiner characterizes Applicants' argument as asserting that the present invention has unexpected results (synergistic action) by combining 1,2-alkanediol and the particular perfumes (shown from Figs 2 to 8, the combination of 1,2-alkanediol), and the combination would not have been predicted by one skilled in the art at the time of the invention and it does not always result in synergistic action in the antibacterial effect by combining two compounds having antibacterial activity. The Examiner notes that Applicants further argues that the advantageous effect of synergistic action can be achieve only by combining 1,2-alkanediol and any of the particular perfumes according to the present invention.

The Examiner asserts that Applicants admit on page 6, second paragraph, that not all combinations of any 1,2-alkanediol and perfume can yield synergistic action, and therefore the Examiner asserts that the "evidence" of synergism is not commensurate in scope with the breadth of the claims.

However, Applicants' "admission" that not all combinations of any 1,2-alkanediol and perfume can yield synergistic action was intended to imply that only the combination of the claimed perfumes with the 1,2-alkanediol would result in unexpected results. The Examiner misinterpreted this to mean that "not all 1,2-alkanediols would result in unexpected results", which was not Applicants' intention. Nevertheless, Applicants admit that the data directly support only 1,2-octanediol combined with the claimed perfumes. Therefore, the Examiner's conclusion of that data not being commensurate with the claims was correct, albeit inadvertently correct.

In order to render the experimental data clearly commensurate with the claims, Applicants herein amend the claims to recite only the 1,2-alkanediol directly supported by the present data. Currently, the only 1,2-alkanediol supported by the data is 1,2-octanediol. Therefore, Applicants herein limit the claimed 1,2-alkanediol to 1,2-octanediol.

In the present response, the claimed 1,2-alkanediol has been limited to 1,2-octanediol as described in the amended claim 1. This amended claim 1 corresponds to the previous claim 3.

In Figs. 2 to 8 of the present specification, test results showing synergistic effects (unexpectedly superior results) obtained by combining 1,2-octanediol with each of the claimed perfumes described in the present invention are shown. In page 5 to 13 of the previous

declaration, the test result showing counteraction (unexpectedly poor result) obtained by combining the (unclaimed) perfumes cited in the Ref 2 with 1,2-octanediol are shown.

The evidence of unexpectedly superior results associated with the unexpected effects associated with the claimed combinations of components are shown in the specification and declaration, and such evidence is clearly commensurate in scope with the amended claims.

The Examiner further stated that it is obvious to formulate agent having antibacterial activity by combining two compounds which both have antibacterial activity.

In response, Applicants note the present specification and the previously submitted declaration. In the specification, test results showing unexpected effects (synergistic action) against a broad range of strains obtained by combining particular perfumes (citral, geraniol, nerol, perillaldehyde,  $\alpha$ -terpineol, dodecanol and L-carvone) with 1,2-octanediol are shown.

In the declaration, the test results showing counteraction (unexpectedly poor results) obtained by combining perfumes cited in the Ref 2 with 1,2-octanediol were shown. Applicants submit that it is proven that combinations of two compounds having antibacterial activity do not result in synergistic action in the antibacterial effect.

These test results described in the declaration and specification show that only the combinations of particular perfumes described in the present invention and 1,2-octanediol can show synergistic action of antibacterial effect against a broad range of strains.

In conclusion, because synergistic effects obtained from combinations of particular perfumes and 1,2-octanediol according to the amended claim 1 is unexpected by Refs 1 to 3, and

therefore the invention described in the amended claim 1 can not be readily assumed by the person in the art.

Applicants submit that the claims 1, 4, 7 and 10, as herein amended, have been shown to contain patentably distinct subject matter.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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